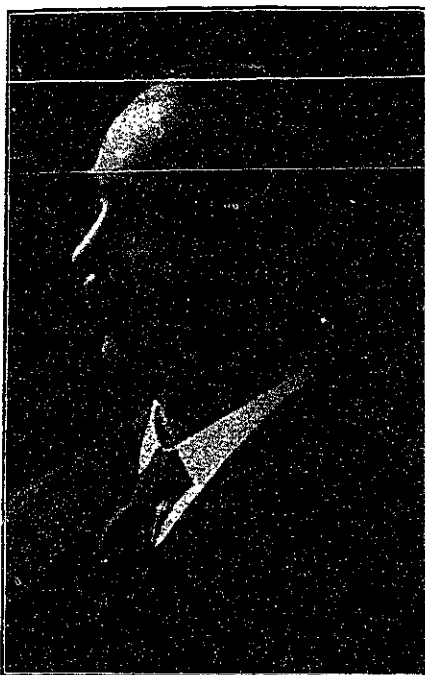


## INSTITUTE TRAINING MARINE ENGINEERS

Shipping Congestion Not Due to  
Lack of Ships But to Shortage  
of Men Necessary to Handle  
Them

PROFESSOR MILLER IN CHARGE



PROFESSOR E. F. MILLER

Word has been received from Washington that one of the most effective ways Technology can do her part in instructing men to take up the duties forced upon us by the war is to train marine engineers and navigators. To this end, the Institute leads the list of technical colleges at which free courses are to be established for turning out engineers trained to man our future merchant marine.

Public opinion has hastily fixed the great difficulty of our transportation problems upon the lack of ships, but the fact that with the present comparatively small number at our disposal, fifty-five vessels were tied up in New York Harbor on June 23 alone, and a corresponding number at early every American port, simply because of the lack of necessary marine engineers to take charge, brings home the fact forcibly that the Institute's duty is not a small one.

Beginning July 9, free courses will be started at Technology, Stevens Institute of Technology, Hoboken, N. J.; Case School of Applied Science, Cleveland, Ohio; Armour Institute of Technology, Chicago, Ill.; Washington University, Seattle, Wash.; and Tulane University, New Orleans, La. These colleges were chosen because of the completeness of their laboratory equipment and of the fact that each one lies on or near a water front.

The entire work at Technology is

(Continued on page 3)

## WAR DEPARTMENT PROPOSES FINAL AVIATION MEASURES

Want \$639,000,000 for 22,625 Fast  
Airplanes

WASHINGTON, July 4—Chairman Dent of the House committee on military affairs received today from the war department the first drafts of the administration bills providing for a gigantic air fleet, with which the United States will fight the Teuton for the supremacy of the air. The proposed measures provide for the building of 22,625 machines, recommending an appropriation of \$639,000,000.

The complete program is covered by two bills, one providing for the organization and personnel of the flying corps, the other regarding the appropriations. The personnel bill will be introduced by Mr. Dent tomorrow, and he will confer soon with Chairman Fitzgerald of the appropriations committee as to the adoption of the measure.

# WASHINGTON BULLETINS STOP; BAKER WOULD EXEMPT ENGINEERS

## BUREAU WILL CONTINUE

News For the Technology Clubs  
Associated Will Keep Coming  
From Capital—Will be Issued  
Through The Tech

With The Tech now a combined undergraduate and alumni newspaper, the bulletins issued weekly by Maurice R. Scharff '09 from the Washington Bureau of the Technology Clubs Associated, have been discontinued. Notice to this effect was given in a letter sent To the Members of the Local Preparedness committees of the Technology clubs. The letter is as follows:

Washington, D. C.,

July 3, 1917:

To the Members of the Local Preparedness Committees:—

Bulk shipments of the Weekly Bulletins to local clubs will be discontinued for the present, and The Tech will be used as a medium for communication with the Local Committees.

### How You Can Help

If Technology is to exercise any influence at Washington, it must be by the widest possible circulation of the information sent out by the Washington Department. This new venture in co-operative college journalism, in fact, has been brought about largely by the failure of the weekly bulletins to reach a sufficient proportion of the alumni. It is vitally important, therefore, that several thousand subscriptions to The Tech shall be secured at the start. Every Technology man will wish to receive The Tech, but many of them will neglect to send in their requests unless you undertake to remind them of it. We therefore request

1. That you canvass your entire membership at once, enlarging your committee for the purpose if necessary, and see that every man sends in his order.

2. If men who have mislaid their order blanks say that they would like to receive The Tech, send in their names and addresses and their orders will be entered on your authority.

### News Service

This project can attain its maximum success only if every Local Committee Member considers himself a reporter for The Tech.

1. Write in at once a complete statement regarding all the Tech men you know who have joined any branch of the Government service, whether military, naval, technical, or advisory. Give in each case the service, rank, and character of work.

2. Send in at all times all the news items you can regarding Technology affairs.

3. If possible, write a news letter once a week telling how Technology men of your section are "doing their bit." Why shouldn't there be correspondence from New York, Philadelphia, Chicago, San Francisco, etc., etc., as well as from Washington and Paris?

### Washington Department

Bear in mind, too, that this venture will not decrease by one dollar the cost of operating the Washington department; it is more likely to increase it. This office must still be maintained; and our contribution to the financial support of The Tech is almost certain to exceed the cost of the weekly bulletins.

We hope, therefore, that you will not relax for a moment your effort to secure from your Club a large contribution to the fund for operating the Washington Department. It is good form to oversubscribe funds these days. What about Technology?

Maurice R. Scharff,  
Executive Secretary.

Who Are You? Where Are You?  
What Are You Doing? Drop a line to the Mobilization Committee, Cambridge.

## Joint Committee on National Service

Massachusetts Institute of Technology.

Bulletin No. 15.

July 6, 1917.

For the purpose of keeping in touch with Technology men during the course of the War, the Institute plans to keep a complete record of each undergraduate and his activities in National Service.

This is an extension of the work of the Alumni Mobilization Committee, and will give the undergraduates benefits accruing from membership in the great Technology organization. It is to the direct interest of every individual man to register himself with the Joint Committee NOW, and to keep the Committee informed of every change in his movements during the War.

Change of address,—industrial work entered upon,—examinations taken for any branch of government service,—should be immediately reported. If a man should be drafted, he should at once notify the Committee. Registration is equally important for students who do not intend to resume their courses in September, and any such are requested to record their intentions.

All information should be addressed to The Joint Committee on National Service, Room 3-203, Technology Buildings, Cambridge.

## CAPITAL DEAD ON 4TH 200 AVIATORS NOW

War Activity and News Slackens on National Holiday.

Washington Correspondence  
By Maurice R. Scharff,

Executive Secretary Technology Clubs Associated.

WASHINGTON, D. C., July 6, 1917—The absence of many people from Washington over the 4th is reflected in a general slackening of war activities and a dearth of Technology news from the Capitol.

### Personal Items

Among those who have called this week have been:

Thos. A. Roper '10 and W. R. McEwen '15, the latter a student in the Machine Gun Course at the Springfield Armory. Applicants for positions in the Ordinance Department of the Army:

Captain G. R. Norton, U. S. A., and Capt. Jas. L. Walsh, U. S. A., both M. I. T. of '07 are working together in the supply division of the Ordinance Department.

A number of Technology men are engaged on work in connection with the use of Noxious Gases, including W. K. Lewis '05, Bradley Dewey '09, Wm. Green '06 and Geo. A. Richter '13.

Among the officers of the 5th Reserve Engineers, which will probably be one of the first railroad regiments to be sent abroad, are Capt. Elton D. Walker, Engineer Officers Reserve Corps, '90, and Capt. Jas. L. Taylor, Jr., '02, Engineer Officers' Reserve Corps.

### Exemption Boards

Some days ago, the Secretary of War invited the Governors of the several states to suggest the names of suitable men for appointment in the District Exemption Boards.

We have been assured that applications and letters of endorsement sent directly to the President, with copy

(Continued on page 4)

## ANSWERS SCHARFF'S NOTE

Government Will Draft Country's Technical Talent For Industrial Service Rather Than Military Work

That the United States discourages the enlistment of men engaged in professions in the American armies, businesses or trades vitally necessary to the carrying on the great war now waging in the American armies is shown by an extract of a letter from the War Department reprinted a short while ago in the fifth bulletin of the Washington office of the Technology Clubs Associated. In the same bulletin the statement is issued that in the drafting of men under the conscription act, full recognition will be made of the fitness of the technically trained man to serve in an industrial capacity rather than in the military. Just what stand the government will take on the undergraduate of draftable age is not known, but in the light of the above expressions of opinion, it is expected that students at technical schools will be returned to their colleges to complete their training.

An extract of the Washington bulletin follows:

We have submitted to the President and the Secretary of War the following recommendation relative to Volunteer Enlistments:

"That a definite effort should be made in filling the Regular Army and National Guard by volunteer enlistment, to discourage the enlistment, in other than technical forces, of technically trained men, skilled industrial workmen, and students in engineering, medical, and industrial schools."

The attitude of the War Department toward this matter is distinctly more encouraging. On June 12th, the Secretary of War issued a statement of the needs of the Regular Army, which concluded as follows:

"It is the earnest desire of the War Department that 70,000 single men, between the ages of 18 and 40, who have no dependents and who are not engaged in professions, businesses, or trades vitally necessary to the prosecution of the war, be enlisted in the Regular Army before the 10th of June, 1917."

We have urged upon the Secretary that this statement be given publicity and called to the attention of all recruiting officers. We now suggest further, that copies of this statement be posted in plants engaged on work connected with the prosecution of the war, with the request that employees confer with their department chiefs before joining organizations being recruited by voluntary enlistment.

### Conscription

We have submitted to the President and the Secretary of War, along with a number of letters and resolutions bearing on the matter, the following recommendations relative to exemption under the Conscription Law:

"That the District Exemption Boards, provided by the Conscription Law, should be composed of citizens of the very highest type at least some of whom, in each case, should be qualified by training and experience to understand our problems of productions and to determine wisely the essentially engineering questions upon which these Boards will have to pass; and

"That the organization of the Nation as a team in which each man shall play the part for which he is best fitted, rather than individual indispensability, should be kept before the Exemption Boards as their guiding principle."

The Secretary of War has assured us that these suggestions "are entirely in harmony with the spirit of the selective service bill, and meet in every way the needs of the situation."

Technology men can do more for Uncle Sam than any other body of men in the country.

Who Are You? Where Are You?  
What Are You Doing? Drop a line to the Mobilization Committee, Cambridge.

# Who Are You? Where Are You? What Are You Doing? Let Us Know

# The Tech

Established 1881

Entered as second-class matter, September 16, 1911, at the Postoffice at Boston, Mass., under the act of Congress of March 3, 1879.

Published bi-weekly during the college year by students of the Massachusetts Institute of Technology.

## MANAGING BOARD

Paul C. Leonard, '17..... Acting General Manager  
Kenneth Reid, '18..... Acting Editor-in-Chief  
Donald D. Way, '19..... Managing Editor  
Richard A. Wilkins, '18..... Acting Treasurer  
William Eastman, Jr., '18..... Acting Advertising Manager  
Augustus P. Farnsworth, '19..... Circulation Manager

Subscriptions within the Boston Postal District or outside the United States must be accompanied by postage at the rate of one cent a copy. Issues mailed to all other points without extra charge.

News Offices, Charles River Road, Cambridge, Mass.; 152 Purchase Street, Boston, Mass. News Phones, Cambridge 2600, Main 3810. Business Offices, Charles River Road. Business Phone, Cambridge 2600.

Although communications may be published unsigned if so requested, the names of the writer must in every case be submitted to the editor. The Tech assumes no responsibility, however, for the facts as stated nor for the opinions expressed. The Editor-in-Chief is always responsible for the opinions expressed in the editorial columns, and the Managing Editor for the matter which appears in the news columns.

FRIDAY, JULY 6, 1917

## THE SCIENTIFIC ATTITUDE.

**S**UCCESS has, probably, been more often subjected to analysis than almost any other abstract attribute. Recent events, in their hurried progress, have doubtless caused many to wonder wherein lies the difference in methods pursued by which, in the one case, success is achieved, and, in the other, with the same apparent amount of sincere endeavor, the aim sought remains unaccomplished.

Technology men are scientific men, and, as such, approach their problems in a scientific manner. Formulas, methods, calculations, do not contain or admit of the entrance of the human element except as a factor in determining the possible error in a calculation. Thus, the scientific man approaches a problem impersonally, neither seeking to push into prominence personal endeavor, nor aiming for personal advancement at the sacrifice of the service to be rendered or the problem to be solved.

Technology was capable of helping the government solve a big problem. She recognized the fact that the problem was the government's, that the government was the place for the work to originate, and that under the government it should be carried on; that the duty of Technology was but to render service, and that whatever credit or blame there was to be should come from the government and not from the Institute.

Technology said to the government, "Here we stand ready to serve, yours, not ours, is the right to say in what manner." And today Technology stands recognized and active in the government service. Technology has succeeded where others failed because Technology is first, last, and always a scientific institution, and it were as incongruous for her to seek personal profit and self-glorification, or to fail in the work undertaken, as it would be for our old friend "pi" to so behave in its proper field of activity.

## GET YOUR NAME ON THE LIST.

**I**N this time of turmoil and confusion, when it is difficult to know where to turn for adequate information and advice, there is one organization upon which the Technology man can depend for support. To arrange for him an opportunity to give his maximum service, to safeguard him from being drawn into the wrong position where his endeavors might be misdirected and ineffectual, to provide for his comfort when in active service, the Institute stands ready, backed by the vast resources of her Alumni Association.

But in order to enjoy this watchful guardianship of his interests, it is necessary for the Technology man to register with the committees which are carrying on the work, and to keep them constantly informed of his whereabouts and activities. No half-hearted response to the call for registration will suffice. The Alumni Mobilization Committee and the Joint Committee for National Service have sounded the call,—the true Technology man will co-operate by answering it now!

Should the young aviation students from Plattsburg who, last week thoughtlessly amused themselves by throwing stones at the lamp posts in the courtyard, finally breaking one of the panes of glass, have reflected that, at the time, they were enjoying the hospitality of the Institute, they would undoubtedly have withheld their childish effort at retaliation against the Technology officer who took them to task.

It is to be hoped that the phrase "an officer and a gentleman" may not have become so old-fashioned as to have lost significance for these aspirants for commissions in the most modern branch of army service.

Erratum: The first paragraph in the first editorial of our last issue should have read as follows:—

However well ordered and smooth running may be the machinery of a great democracy, those principles of centralization and concentration of power, so essential to the successful conduct of a business, are found necessary in the conduct of the war. Not only must the responsibility be concentrated in the hands of a few, but those chosen for such responsibility must represent the highest intellects of the country.

## Sophs Leaving For Camp



Technology, Me., June 26 (delayed)

—Major Russel, who is in charge of Camp Cunningham, in speaking to the Sophomore company this week, said that the camp was a bigger success than any similar undertaking Technology had ever assumed. "I want to congratulate you men upon the thoroughness with which you have entered upon all your duties and especially upon the care which you have used in keeping the grounds cleaner than I have ever known them to be before."

The life at camp continues to keep the men hustling most of the time. Sunday usually finds between sixty and seventy hiking four and one-half miles, sometimes through the thickest kind of mud, to the nearest church. During the week, the campers have drill constantly under the supervision of Captain Wirt. The old tricks which have become traditional to all freshman classes fail completely as excuses when they have to come before the judicial eye of First Sergeant Lewis. He does not consider that tardiness or absence has any legitimate excuse so the men have learned to be "on time all the time."

Most of the drilling the last few days has been devoted to extended order work. Part of the time, however, was utilized in the instruction by the Ordnance Department in the use and care of the U. S. Army rifle, the Springfield 1913, and in aiming and firing of the pieces. Before long the men are to use the new ranges which have been under the process of construction.

The "rookies" have had a taste of the Jersey pests that have evidently migrated to Maine, for the camp suddenly realized last Saturday that every bed must be well protected by a thick

coating of mosquito netting or its occupant be compelled to spend the night fanning himself feebly in the darkness. Mrs. Cunningham, whose thoughtfulness of the men has made life at camp doubly pleasant, sent a large quantity of the precious protective netting which now insures every man with the well-earned night's rest.

Dr. Adams, the camp physician, has been taking a stiff course in military tactics as well as giving instruction to the men and looking after his patients. Last Sunday after mess, the doctor gave an interesting and practical talk on "First Aid" The sick list has been fortunately small. George McCarten who has been under the doctor's care with a case of tonsillitis since the beginning of camp, is now out. Major Russell's son was assigned to sick bay for a few days, but is now able to take up his duties with the other men.

"Ed" Tuttle has won the envy of all the men around camp for his ability in fishing. The officers' mess frequently contains the results of his catch, while the "amateurs" have to sit patiently and watch him pull them in.

The power house which Captain Smith is building is now being rushed to the full capacity of the materials at hand. The work has progressed so rapidly that he anticipates that the building will be entirely completed before he leaves the camp on Saturday.

Last Sunday was to have been "Visitors' Day," but owing to a heavy rain fall, the visitors did not arrive. A member of the Corporation, Mr. Eaton, visited the camp on Monday, coming through the deeply rutted roads in his automobile. The following morning he "turned out" before reveille and returned with a string of salmon for the officers' breakfast.

## CALIBAN AT STADIUM

### Many Institute Men Engaged in Shakesperian Masque

Just as Technology gave to Boston her first great pageant at the Reunion last spring, she is now taking a prominent part in the production of another masque founded on a similar theme. Not only are some of the prominent roles in "Caliban" taken by Institute men, but the composer of the music is none other than Arthur Farwell '93, a course VI man, who is at present on the editorial staff of "Musical America."

Ralph Adams Cran is chairman of the "Caliban" committee and T. D'Arcy Brophy, '16, is Administrative Director. Brophy graduated in course IV and is credited with having designed the stage "Cy" Guething is in charge of the sales and Mark Lemmon is superintendent.

The steam curtain, which was used so effectively at the Reunion, was designed and installed by Professor Edward Miller '86, and the acoustics were planned by Clifford M. Swan '99, acoustical expert for the H. W. Johns-Manville Company of New York. Swan has used a new principle in the construction of the stage by making the sound-boards flat instead of in the usual shall shape. The preparation of the stage required six months. It was built at a cost of \$20,000 and is the largest stage ever constructed, being 225 feet long and 65 feet high. The whole is lighted by 139 searchlights, six of which are 2,000,000 candlepower each, the rest being 290,000 apiece. The stage is a product of Technology in more than one way, since a small model of it was constructed in the wood-turning laboratory before it was set up.

Only the sections from 10 to 29 in the Harvard Stadium are used, since it would be impossible to hear at a great distance. The inclosed part of the Stadium is large enough to seat 18,000 people.

The production includes a chorus of 800 and an orchestra of 100, all of whom are either professionals or come from the vicinity of Boston. The chorus is hidden during the greater part of the performance.

The dances were designed and rehearsed under the direction of Virginia Tanner, who has done this work for the Tech Show during the last few years. J. Paul Gardner '18, dances as "Osiris" and in the Spanish-Italian group. William Eastman '18, and John Meeker also take part in one of the groups.

The theme of "Caliban" is the slow education of man from his primitive beginnings toward the goal of co-operative civilization. This is much on the order of the Technology Pageant of last year, which represents man as becoming master over the forces of Nature.

The opening scene is in the cave of Setebos. Ariel is held fast in the fangs of the tigertoad idol. Caliban here calls upon the Priests of Setebos, Lusts, Death and War. They perform before the eyes of the tortured Ariel a barbaric ritual in worship of the idol. Miranda emerges from the cave with her father, Prospero, the magician of art. He brings into being the dramatic art of Antiquity.

In the first interlude are introduced two strikingly beautiful pageants, or rituals, Egypt and Rome. In the former the priests and dancers symbolize the resurrection of the golden Osiris, God of Spring. In the latter, during the action, the beauty of the costumes with the varying lights playing upon them, creates a gorgeous spectacle, the great citizen of Athens, as represented by Pericles and Aspasia, the second chorus of Sophocles' tragedy "Antigone" being enacted. Throughout the music, specially written, adds tremendously to the success of the story, unfolding vividly, graphically. The music for the character of Caliban is boisterous, uncouth, and passionate; for Miranda it is graceful and flowing in character; for Prospero it is inspiring and uplifting.

In act I, Prospero really begins the education of Caliban. This is facilitated by brief glimpses from the works of the master dramatist, Shakespeare, including "Antony and Cleopatra," "Trollius and Cressida" and "Julius Caesar."

During the action of this act, Caliban learns readily. He becomes greedily ambitious. Seizing the magic staff of Prospero, he invokes a vision of his own, one in keeping with his uncultured intelligence—of the Romans and Caligula. His answer is an orgy of de-

## Robert A. Boit & Co.

40 Kilby Street  
Boston

## INSURANCE OF ALL KINDS

## BEMIS BRO. BAG CO.

Established 1858

## Cloth and Paper Sacks

Boston Office: 40 CENTRAL STREET

### OPERATING PLANTS AT

St. Louis	Memphis
Minneapolis	San Francisco
Indianapolis	Seattle
Kansas City	Winnipeg
Omaha	Peoria
New Orleans	Bemis, Tenn.

A. F. Bemis, '93	F. H. Boynton, '15
G. R. Wadleigh, '97	A. H. Clarke, '15
D. Belcher, '09	H. P. Claussen, '16
P. E. Morrill, '14	J. R. Hunneman, '16
Allen Abrams, '15	T. W. Little, '16

## ANGUS JUTE CO., LTD., CALCUTTA, INDIA

A. F. Bemis, '93	H. G. Morse, '16
H. W. Waterfall, '11	W. L. Ogden, '16
P. McCulloch, '14	P. W. Rowe, '17

## Homer F. Livermore INCORPORATED



85 and 87 Pearl Street  
BOSTON

cadent splendor in which Lust leads. Just as the fiendish character, Lust, attempts to lay hands upon Miranda, there is a peal of silvery trumpets; the wonderfully manipulated lights throwing terrifying shadows across the sands, and then in the background glows the beautiful Cross.

Prospero then calls forth the pageant of the Middle Ages, France, Spain and Italy. Germany is omitted. The Germanic is also left out of the Second Interlude, the French-English predominating, an immensely interesting scene. On the Field of the Cloth or Gold, depicting a 1520 period, King Francis I of France greets King Henry VIII of England. The thrilling feature of this spectacle is the celebration of the league of nations by the holding of a tournament in which 50 horsemen participated.

In act II, Miranda comes to her father with a troop of little fauns, carrying old manuscripts. This symbolizes the Renaissance. During this action Caliban, after having been shown a wonderful vision from "Hamlet," begs for Prospero's magic scroll with which to exercise Death. But Death overcomes him, seizes Miranda, and carries them both amid the heavy thundering and wailing into the cave of Setebos.

In the third interlude, Elizabethan England, a May-day festival, with Morris dances, country dances, singing and clowning, is held. This is an airy, beautiful episode, leading up to the third act, in which the surly Caliban returns, repentant. Once again he is permitted to wear Miranda's cloak. He confesses his love for her. Varying incidents and the showing of scenes from "The Merry Wives of Windsor" lead Caliban to believe that he is being mocked. Again he seizes the staff of Prospero and calls upon War to aid



Dean Burton Preparing Men to Man Big Merchant Fleet

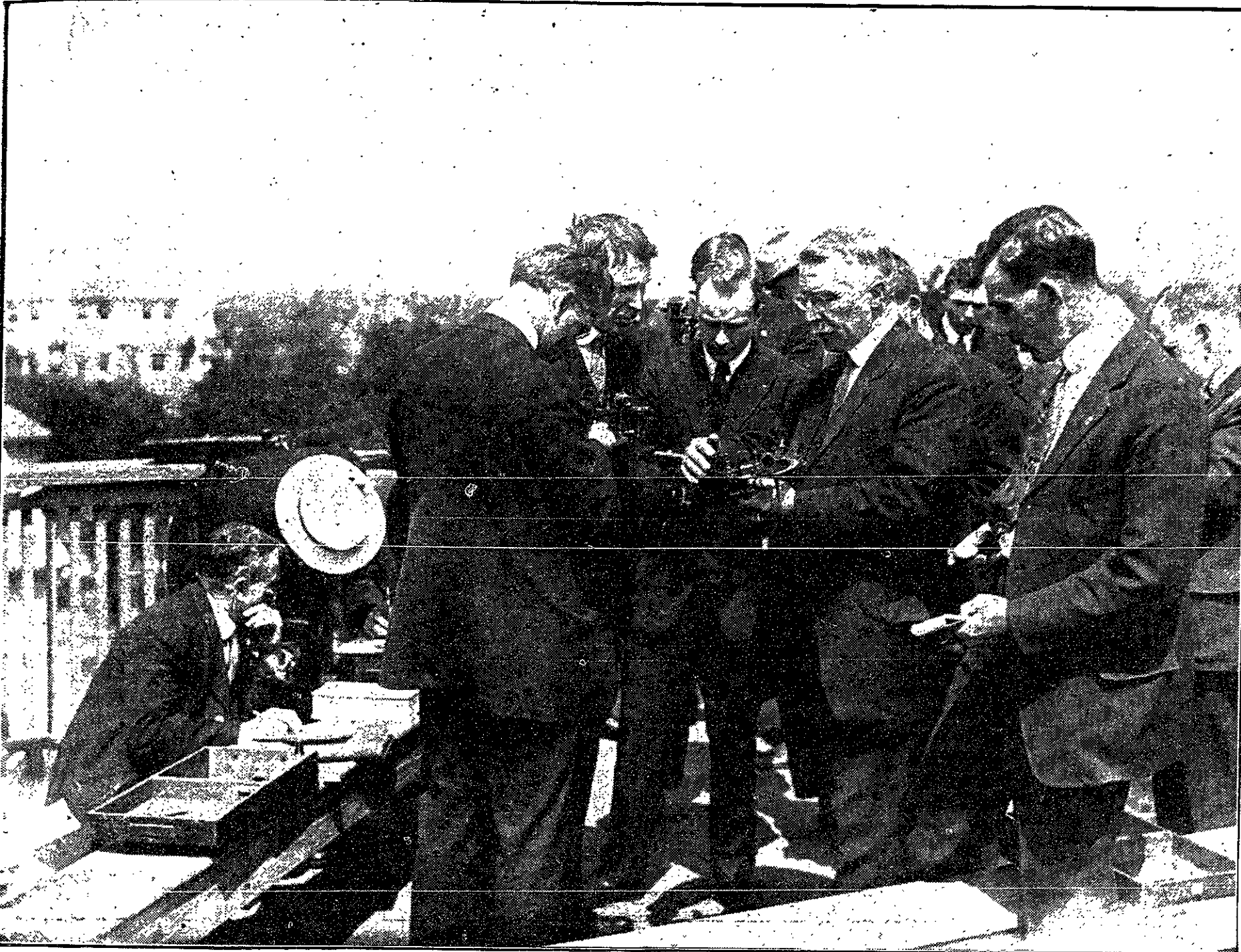


Photo by International Film Service.  
DEAN BURTON SHOWING SAILORS HOW TO USE THE SEXTANT AT THE FIRST SCHOOL FOR FIRST OFFICERS, HELD FOR CONVENIENCE AT THE HARVARD ASTRONOMICAL OBSERVATORY

Six more schools for the training of fishermen to fit them for first officer-ships, will open a week from Monday, under the direction of Dean Burton of the Institute, at Atlantic City, Cape May, Philadelphia, Baltimore, Crisfield, Md., and Norfolk. The work of starting the schools is being rushed and arrangements have nearly been completed for supplying instructors for the young merchant marine officers. For Atlantic City the head of the institute will be Professor Harrison W. Smith of Technology; for Cape May, Russell Patterson, the son of a well known navigator; at Philadelphia, Professor Eric Doolittle of Harverford Observatory; for Norfolk, Professor S. A. Mitchell, director of the McCormick Observatory, University of Virginia has been named, while William R. Ransom, Professor of Mathematics at Tufts is still to be assigned a place. He was originally scheduled for the school in Boothbay, Me., which opened on Monday, but the director finally chosen is Captain Warren Shepard of the Rudder.

The task of running these schools was given the Institute by Henry Howard of the Shipping Board for the preparation of chief officers. The plan is to give intensive training in use of instruments, in computation and a few studies of the kind, to men with good nautical experience. Skilled in the technique of management of vessels the special training will afford to the Government quickly the much needed officers for the steel merchant fleet that is to be built. Mr. Howard, a graduate of the Institute in 1888, has undertaken a great variety of naval work for the Government and in this matter has left the organization and management of the schools to Dean Burton, who has turned

him in winning Miranda. Here the steam curtain, used throughout to conceal the rapidly changed scenes on the upper stage, is wonderfully effective. War finally conquers. But then arises the Spirit of Time, and beautifully calms the frenzy of the night.

Then, out of the dimness, comes Caliban. Groping, dazed, he reaches his arms toward the dark circle where the Spirit of Time has risen. Then calling the entire body of participants, Caliban offers homage to Prospero. With arms raised the giant figure kneels upon the earth and with a great gesture of aspiration leads the invisible choir and hidden orchestra in the closing strains of song.

At the close of the drama the orchestral accompaniment continues, passing into the strains of the national anthem, in which all the participants and the spectators join.

INSTITUTE TRAINING  
MARINE ENGINEERS  
(Continued from page 1)

under the direction of Professor E. F. Miller, head of the Department of Mechanical Engineering, who has made ample preparation to effectively care for the needs of as many men as apply. If the number totals 150, the Institute will furnish seven members of the Faculty to take charge of the various courses so as to insure as nearly individual instruction as possible. Up to the present time, thirty-four men have applied for admittance to the courses given at Technology.

These courses will be open to all who have had sufficient sea-going experience to warrant their acceptance. Applications for admittance must be sent to the local U. S. Steamboat Inspector. If the applicant is accepted, he will be sent to the nearest technical college which has been designated as a training school for marine engineers, where he will take a course which will fit him to hold one of the positions in the engineering branch of the merchant marine.

When his course is completed, he will be sent to sea for three months' training, after which he must present himself for examination before the Shipping Board at the port from which he started. Graduates of Course II at Technology will be permitted to enter immediately upon the courses which gives the sea-going experience without having to take the preliminary work at any of the institutions named; but the examinations given by the Shipping Board must be taken.

All of the men who wish to obtain licenses as marine engineers in the merchant marine are required to spend the three months at sea for experience. Pay during this time will be \$75 a month with board for the first two months, with the possibility of an advancement in salary if the man shows himself sufficiently capable to warrant it.

The rank which the applicant receives will be dependent upon the grade which he obtains in the Shipping Board's examination. All marine engineers will receive pay which is governed by the rank which they hold and the tonnage of the vessel they run.

The pay of a chief engineer is \$225 a month with board, while that of an assistant engineer is \$190. The assistant engineer of a tug, the smallest craft that is used, is \$90. In addition to the fixed salary granted, a bonus ranging from fifty to one hundred per cent is added for all men whose work carries them through the war zone during the period of the present conflict.

The proposition has already appeared to several men because the service does not require regular enlistment in the Navy and employment is independent of the duration of the war. All positions are government paid but the men act in civilian capacity. Wages at the present time are attractively high and the opportunity for advancement is greater than it will be for many years to come.

William H. Seymour '17, a graduate of Course II, who has had previous sea-going experience, has already taken the Shipping Board examination and received the rank of third class engineer.

RIFLEMAN MAKES RECORD

H. R. Stewart '17 Makes "Possible" at Plattsburg

PLATTSBURG, N. Y., June 30, 1917 --The work this week has been mostly on the range, this being interspersed with outpost and advance guard problems. Howard R. Stewart, M. I. T. '17, has unofficially the best range record so far, with 50 out of a possible 50 at 300 yards. Stewart was formerly on the Rifle Team and holds several world records. The effects of the training work in the gallery before going on the range can be easily seen in the fact that many who never before handled the service rifle are making excellent scores.

The close order drill work has been cut down and more time is being devoted to the terrain exercises and the blackboard talks in minor tactics. Tests are given every Saturday morning. Tomorrow's will include three hours' close order company drill, in which each man will be given an opportunity to command either the whole company or a platoon and will be marked accordingly. After this will come an hour examination in map reading. This of course is easy for the Technology men, but some of the others have great trouble in distinguishing between contour lines and streams, the maps being of one color. The 5th Company is recognized throughout as the "best" company in the regiment.

Everyone is looking forward to the new baseball league which has four teams:—

1. New England Infantry.
2. New York Infantry.
3. New England Cavalry and Artillery.
4. New York Cavalry and Artillery.

It has been impossible to compile a list of the Technology men under the reorganized branches of the service, but this may be possible later on. The following is a list of the men originally training at Plattsburg from the Institute:

FACULTY		
C. W. Green, Assistant Professor Electrical Engineering		
F. G. Perry, Instructor in Electrical Engineering		
H. B. Richmond, Instructor in Electrical Engineering		
H. Sutherland, Instructor in Civil Engineering		
W. B. Littlefield, Assistant in Electrical Engineering		
E. W. Bowler, Assistant in Electrical Engineering		

UNDERGRADUATES		
	Company	Class
C. R. Barnard	VII	1917
D. E. Bell	III	1917
A. R. Brooks	III	1917
E. P. Brooks	XI	1917

P. B. Brown	IX	1919
J. M. Carter, Jr.	IV	1919
W. A. Clark	XIII	1917
L. L. Clayton	XII	1917
H. Connett	X	1918
R. S. Coward	X	1920
W. J. Creedon	I	1919
E. F. Deacon	I	1919
J. W. Doon	XIII	1917
S. C. Dunning	V	1917
W. W. Eaton	IX	1917
S. M. Foster	I	1918
H. B. Gardner	VIII	1917
G. E. Gay	III	1919
J. W. Gibson	VIII	1919
J. A. Goldthwait	XII	1919
J. Harper	II	1917
L. T. Hill	V	1917
N. C. Hinckley	XI	1918
J. R. Kelly	I	1917
K. M. Lane	X	1917
J. T. Leonard	VII	1918
W. L. Littlefield	XIII	1917
H. E. Lobdell	V	1917
R. J. McLaughlin	VII	1917
L. McVickar		1918
G. R. Martin	XIV	1919
E. A. Mead	II	1918
A. E. Moody	II	
A. E. Page	III	1918
A. W. Pope, Jr.	III	1918
T. W. Ryan, Jr.	VIII	1917
F. G. Senter, Jr.	IX	1917
J. G. Strowbridge	XIII	1919
H. C. Wasgatt	I	1919
N. C. Works	XIV	1917
P. L. Young	IV	1920

The Tech  
Caf



Open Daily and Sunday  
Until Further Notice



Hotel  
Lenox

An hotel which has the atmosphere of a college club.

Historic as a stopping place for University Athletic Teams.

Unusually attractive to college men—graduates or undergraduates.

Popular for its dances in the Rose Garden from 10 P. M. to 1 A. M. Saturdays 9 P. M. to 12 P. M.

L. C. Prior, Managing Director

TRY

Rupert Lunch

For Good, Wholesome Food

NEAR THE M. I. T. DORMS

Tel. Camb. 25277

Discount on Meal Tickets



## U. S. NEEDS TECHNICAL MEN FOR SERVICE DURING WAR

Washington

July 3, 1917

Position	Service	Salary	Date of Examination	Cir. No.
Shot Firer	Bureau Mines	\$840	July 17	1107 (Amended)
Land Classifier	Geol. Survey	1,080-1,200	—	1401
Insp. Machinery	Navy	352-600 p. d.	—	1405
Topographic Draftsman	Coast and Geodetic Survey	1,000-1,200	July 25	1406
Mechanical Engineer	Interstate Commerce	720-1,680	July 25	1407
Signal Engineer	Interstate Commerce	720-1,680	July 25	1408
Structural Engineer	Interstate Commerce	720-1,680	July 25	1409
Telegraph and Telephone Engineer	Interstate Commerce	720-1,680	July 25	1410
Engineer of Tests	Ordnance	1,000-2,400	—	1411
Cement Insp.	Bureau Standards	900	July 25	1450
Phys. Lab. Helper	Bureau Standards	600-840	July 25	1451
Grain Investigator	Agriculture	2,000-2,760	July 24	1452
Dairy Husbandman	Animal Industry	1,500-2,500	—	1453
Poultry Husbandman	Animal Industry	1,500-2,500	—	1454
				1455

## ONLY 1,000 NEW BIDS FOR RESERVE OFFICERSHIPS

## Men Needed for Second Series of Training Camps

A call was sent out Monday by the Military Training Camp's Association which is recruiting for the second series of reserve officers' training camps for more men, less than one thousand applications being now on file. According to information given out by the Adjutant General at Washington, D. C., mature men will have preference over the youth of the country only where qualifications are equal. There was no intention, it was said, to bar applications by men under 31, though examining physicians have been informed that ages 25 to 35 are the most suitable.

## CAPITAL DEAD OVER

(Continued from page 1)

sent to the Probate Marshall General, will receive as careful consideration as nominations made by the Government. We would suggest to local committees sending in applications, however, that whenever possible, steps be taken to secure the endorsement of the application by the Government. All such applications should be sent in at once, as the receipt of applications may be expected to terminate shortly.

It may be stated as practically assured that each District Board will include in its membership at least one man with thorough training and broad experience along engineering or industrial lines.

## Conscription

The important event of the week has been the publication on July 2nd of the Rules and Regulations prescribed by the President in accordance with the Act of May 18, 1917, for the Government of the Local and District Exemption Boards. The Secretary will be pleased to answer so far as possible any questions that may be addressed to him regarding these Rules and Regulations.

Abstracts of the Rules have appeared in the daily newspapers, but the section (Section 44) relating to discharge on account of character of occupation is believed to be so important for Technology men that it is reprinted in full in another column.

It will be noted that it will be necessary to show, as a basis for discharge, both,

1. That the particular industry in which the person is engaged is "necessary to the maintenance of the Military Establishment or the effective operation of the Military forces, or the maintenance of National interest during the emergency," (except in cases where the President may have designated certain industries or classes of industries as necessary for these purposes); and

2. That the services of the person are necessary to the maintenance of the industry, and that he cannot be replaced by another person without direct substantial material loss, and detriment to the adequate and effective operation thereof.

An employer may file a claim for discharge "in respect of any person certified to a District Board as called for service not exempted or discharged by a Local Board."

The time allowed for filing such claims is not long. (Five days after the mailing by the Local Board of notice of certification to the District Board), and employers in "necessary" industries should determine in advance their "key men of—whom ones cannot be replaced without direct substantial material loss to the adequate and effective operation of the enterprise"—so as to be prepared to enter claim for their discharge.

Who Are You? Where Are You? What Are You Doing? Drop a line to the Mobilization Committee, Cambridge.

## RULES GOVERNING EXEMPTION BOARDS PUBLISHED THIS WEEK

## Employment Must Be of Vital Importance to Exempt Claimant

Section 55 of the "Rules and Regulations Prescribed by the President for Local and District Boards" is published in full as follows:—

Sec. 44. Procedure of district boards in cases where a district board has exclusive original jurisdiction under the terms of said act of Congress.—District boards have exclusive original jurisdiction, in respect of any person whose name has been certified to a district board as called by a local board within its jurisdiction and who has not been exempted or discharged, to hear and determine all questions or claims for including or excluding or discharging any such person arising under the following provision of said act of Congress authorizing the President to exclude or discharge—

persons engaged in industries, including agriculture, found to be necessary to the maintenance of the Military Establishment, or the effective operation of the military forces, or the maintenance of national interest during the emergency.

A claim for discharge under this provision of said act of Congress may be filed with a district board by, or in respect of, any person whose name has been certified to the district board by a local board within the jurisdiction of such district as one called for service by such local board and not exempted or discharged.

Any such claim\* for discharge must

\*Use Form No. 161 or 161 (a). be filed with the district board on a form provided by the Provost Marshal General and supplied by district boards and local boards for that purpose on or before the fifth day after the mailing by a local board of notice to such person that his name has been certified to such district board as called for service and not exempted or discharged.

The statement on the registration card of any such person that exemption or discharge is claimed shall not be construed or considered as the presentation of a claim for discharge.

Such a claim may be filed by any such person on any of the following grounds:

1. That he is actually engaged in a particular, designated, industrial enterprise, or in a particular, designated, agricultural enterprise necessary to the maintenance of the Military Establishment; that his continuance therein is necessary to the maintenance thereof, and that he cannot be replaced by another person without direct substantial material loss and detriment to the adequate and effective operation of the enterprise in which he is engaged.

2. That he is actually engaged in a particular, designated, industrial enterprise, or in a particular, designated, agricultural enterprise necessary to the effective operation of the military forces; that his continuance therein is necessary to the maintenance thereof, and that he cannot be replaced by another person without direct substantial material loss and detriment to the adequate and effective operation of the enterprise in which he is engaged.

3. That he is actually engaged in a particular, designated, industrial enterprise, or in a particular, designated, agricultural enterprise necessary to the maintenance of national interest during the emergency; that his continuance therein is necessary to the maintenance thereof, and that he cannot be replaced by another person without direct substantial material loss and detriment to the adequate and effective operation of the enterprise in which he is engaged.

The word "necessary" as used in said act of Congress shall be construed and held to mean that the discontinuance of, or serious interruption in, the particular, designated, agricultural enterprise in which the person is engaged would result in substantial material loss

and detriment to the adequate and effective maintenance of the Military Establishment, or the adequate and effective operation of the military forces, or the maintenance of national interest during the emergency.

The word "necessary" as used in the phrase "that his continuance therein is necessary to the maintenance thereof" in these regulations shall be construed and held to mean that the withdrawal of the labor or service of such person would directly result in substantial material loss and detriment to the adequate and effective operation of the particular, designated, industrial enterprise or particular, designated, agricultural enterprise in which such person is engaged.

Affidavits in support of or in opposition to any such claim shall be filed within five days after the filing of a claim for discharge by or in respect of any such person.

The words of the act "persons engaged in industries, including agriculture," shall not be construed and held to mean that a person engaged in a particular industrial enterprise or particular agricultural enterprise is entitled to be discharged by reason of the fact that such class of industry, taken as a whole, or agriculture, taken in its entirety, is necessary to the maintenance of the Military Establishment, or the effective operation of the military forces or the maintenance of national interest during the emergency.

In order to substantiate any such claim the evidence submitted must establish that the particular, designated, industrial enterprise or particular, designated, agricultural enterprise is necessary to the maintenance of the Military Establishment, or the effective operation of the military forces, or the maintenance of national interest during the emergency.

The evidence must also establish, even if the particular industrial enterprise or particular agricultural enterprise is found necessary for one of the above purposes, that the continuance of such person therein is necessary to the maintenance thereof, and that he cannot be replaced by another person without direct substantial material loss and detriment to the adequate and effective operation of the particular industrial enterprise or particular agricultural enterprise in which he is engaged.

In order to assist in securing uniformity in decision and practice of district boards and to provide for cooperation and coordination between the necessities of the Military Establishment, the military forces and national interest, and the industries, including agriculture, found to be necessary to the maintenance of the Military Establishment or the effective operation of the military forces or the maintenance of national interest during the war, the President may, however, in his discretion, from time to time ascertain and determine which industries, including any agricultural industries, or classes of industries, including agricultural industries, are necessary for the purposes specified in said act of Congress, and may certify to the respective district boards, with the force and effect of regulations prescribed by the President in accordance with the terms of said act of Congress, that a designated industry, including any agricultural industry or a designated class of industrial or agricultural enterprises is or are necessary for one of the purposes specified in said act of Congress.

In the event that any industrial enterprise or agricultural enterprise is included among those so certified, the evidence submitted to the district board must nevertheless establish the facts that the continuance therein of the person, by whom or in respect of whom the claim is made is necessary to the maintenance thereof, and that he cannot be replaced by another person without direct substantial material loss and detriment to the adequate and effective operation of the particular industrial en-

## James W. Brine Co.

286 Devonshire Street  
BOSTONHarvard Square  
CAMBRIDGE

## ATHLETIC OUTFITTERS

and

## MILITARY UNIFORMS

Regulation Army Shoes, Marching Sox, Flannel Shirts, Rubber Coats,

Ponchos, etc. Special prices to M. I. T.

Phone, Fort Hill 730

## ALUMNI NOTES

The following report was issued Monday from the central office of the Alumni Committee on the Mobilization of Technology's Resources in Boston. As the report contains an extract or all of the Alumni's activities, it is published with a few omissions:

## The Report

"As you know, a blank form for registration of our men was designed and sent out, from which about 6,000 replies have been received. These have been classified, and already nearly 1,000 names of what seem to us suitable men have been furnished to the various departments at Washington. Our blank has served as a model for a number of other organizations, and Mr. Litchfield has been called in consultation on this work by sundry agencies in Washington and New York. We have been informed by various government officials that the plan of the Institute in this direction is better systematized than is that of any other body.

Mr. Litchfield is spending the greater part of his time in Washington, co-operating with many of the departments in securing not only Institute men, but others for special jobs there. Unless one is on the spot it is difficult to realize the number of ways in which a "free lance" in close touch with Technology's resources can be of direct service to the Federal departments and to the Council of National Defense.

## Plan Senior Reserve

Litchfield is also assisting several of the departments in the work of registration and classification; and, just at present, is working out with the Department of Labor a country-wide plan for a "Senior Reserve" which shall safeguard as far as possible the industries from having their important men taken away by the draft for positions that might be equally well filled by unskilled workers.

## New Washington Office

In April, a meeting of the Technology Clubs Associated was held in Cleveland, at which most of the members of the mobilization executive committee were present, and a plan was agreed upon under which the Technology Clubs Associated co-operate by maintaining an office at Washington in charge of Mr. Maurice R. Scharff '09. This is serving

terprise or particular agricultural enterprise in which he is engaged.

It shall be the duty of each district board to ascertain by its own methods the existing conditions in industries that may be claimed to be necessary within the meaning of the act of Congress and these regulations and the agricultural conditions as a whole within its jurisdiction, as they may be affected by the drafting into the military service of the men called by the respective local boards within its jurisdiction.

It shall also be the duty of each district board to ascertain as near as may be the labor supply available for such necessary industries and for agriculture outside of the men called for military service; and to take into consideration all such facts in determining such claims, and the effect of the efforts of governmental agencies to mobilize and to make such labor more efficient.

If, in the opinion of the district board, the direct substantial material loss to any such industrial or agricultural enterprise outweighs the loss that would result from the failure to obtain the military service of any such person, a certificate of discharge may be issued to him subject to the conditions of Section 45 hereof.

Within five days after the closing of proofs in any such case, the district board shall decide in favor of or against any such claim.

as a centre of information on questions of personnel, and also in keeping the fifty Technology associations throughout the country informed of the developments in Washington.

## Technology Women Mobilize

Meanwhile your committee has secured authorization from the Alumni Council to establish associated committees of women to co-operate: (1) in keeping in touch with all Technology men in the service of the government here and abroad; (2) in establishing local committees to render friendly service to wives, mothers and daughters of Technology men who are absent upon Federal and State service; (3) in standing behind the center in France for Tech men, referred to below; and (4) in helping in many other ways which will appear as the war progresses. The executive committee of women has been organized as follows: Mrs. Edward Cunningham (chairman), Mrs. Edwin S. Webster, Mrs. Harry M. Goodwin, Mrs. Frederick T. Lord, Miss Mabel K. Babcock, and Miss Evelyn Walker.

## Establish Paris Center

A large honorary committee, with Mrs. MacLaurin as chairman, and a smaller advisory committee of the wives of prominent Institute men around Boston, are in process of organization. These committees of women are for the present to use my office as their headquarters, and Mrs. Cunningham's committee, in co-operation with ours, has already arranged to establish in Paris, a center for Technology men. This will provide a direct medium of communication between Institute men at the front and their families, and through it will be worked out a system for keeping in constant touch with the boys and for performing for them those many little services which are beyond the scopes of governmental agencies. Van Rensselaer Lansingh '98, who has been doing volunteer work in Washington for the Council of National Defense, has been released, to take charge of this center, and is sailing for France this week. Effective steps are being taken to co-operate as far as possible with other colleges contemplating similar centers, so as to provide, at Paris (and possibly also in London) an "American University Club" for all college men in service abroad.

## Co-operate With Nation

We have co-operated also with the Council of National Defense in mobilizing the vocational schools of the country for the important service of: (1) giving intensive training to minors to enable them to take the places of artisans called to service; (2) providing special training for partly trained mechanics and technicians, so as to meet the need for vast numbers of such men in the military, naval, aircraft, supply and medical services; and (3) giving intensive technical training for the inspection service, so that this service may not draw too heavily upon the already limited supply of experts in the Army and in the factories. The President is so far convinced of this need as to have sent out a general letter urging the vocational schools to undertake this work, and plans for carrying out his wishes are actively under way.

## ARMY INSTRUCTOR MARVELS AT INSTITUTE IN WAR-TIME

Captain Harold E. Dunwoody, U. S. A., head of the department of Natural Philosophy at the United States Military Academy, returned to West Point last Saturday after an eight days' inspection of the military activities at the Institute buildings here. On his return Captain Dunwoody said, "Technology in war-time has been an eye opener to me. I am taking much inspiration back to West Point."

Who Are You? Where Are You? What Are You Doing? Drop a line to the Mobilization Committee, Cambridge.